



# भारत का राजपत्र

## The Gazette of India

प्राधिकार से प्रकाशित  
PUBLISHED BY AUTHORITY

सं० 35]

नई दिल्ली, शनिवार, सितम्बर 1, 1973 (भाद्र 10, 1895)

No. 35]

NEW DELHI, SATURDAY, SEPTEMBER 1, 1973 (BHADRA 10, 1895)

इस भाग में जिस पृष्ठ संख्या दी जाती है जिससे कि यह अलग संकलन के रूप में रखा जा सके  
(Separate paging is given to this Part in order that it may be filed as a separate compilation)

### भाग III—खण्ड 2

### PART III—SECTION 2

पेटेंट कार्यालय द्वारा जारी की गई पेटेंटों और डिजाइनों से सम्बन्धित अधिसूचनाएं और नोटिस

Notifications and Notices issued by the Patent Office relating to Patents and Designs

#### THE PATENT OFFICE PATENTS AND DESIGNS

Calcutta, the 1st September 1973

The dates shown in crescent brackets are the dates claimed under Section 135 of the Act.

#### APPLICATION FOR PATENTS FILED AT THE HEAD OFFICE

13th August 1973

1859/Cal/73. Council of Scientific and Industrial Research Improvements in or relating to the fabrication of solid foil type aluminum electrolytic capacitors.

1860/Cal/73. Council of Scientific and Industrial Research. A hand shearing machine for cutting sheets.

1861/Cal/73. Ici Australia Limited. Apparatus. (17th August 1972).

1862/Cal/73. Aci Industries, Incorporated. Filter Assembly.

1863/Cal/73. Improved machinery, Inc. Gaseous reaction apparatus.

1864/Cal/73. Pfizer Corporation. 2 and 3 substituted 4-heterocyclic amino-sulfonyl benzene sulfonamides as cerebral vasodilators. (12th August 1972).

1865/Cal/73. Bethlehem Steel Corporation. Method of treating ferrous strand by hot dip coating procedure.

1—217GI/73

1866/Cal/73. Kobe Steel, Ltd. A method of and an apparatus for agitating a bath of melted metal for treating the same.

1867/Cal/73. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the preparation of polyamides.

1868/Cal/73. Geep Flashlight Industries Limited. A leclanche type dry cell provided with improved venting and sealing means.

1869/Cal/73. Geep Flashlight Industries Limited. An improved primary dry cell and a process for manufacture thereof.

1870/Cal/73. Geep Flashlight Industries Limited. A leclanche type dry cell provided with improved sealing means.

1871/Cal/73. N. V. Philips Gloeilampenfabrieken. Supervision arrangement for a pulse code-modulation system.

1872/Cal/73. Pritam Singh. Universal shunt motor.

1873/Cal/73. Chandra Prokash Mahalwala. An apparatus for fast and slow reproduction of speech.

1874/Cal/73. Desmond Mario D'Souza. Multiplex coin operated system for public call telephones.

14th August 1973

1875/Cal/73. Burroughs Corporation. Document driven roller.

1876/Cal/73. Burroughs Corporation. Fail soft interrupt system for a data processing system.

(455)

- 1877/Cal/73. Burroughs Corporation. Improved incremental feed device for advancing paper tape, record cards and an inked ribbon in a printer.
- 1878/Cal/73. Camillo Corvi S.p.A. Improvements in or relating to the preparation of sobrociol.
- 1879/Cal/73. Nippon Soda Co., Ltd. Thiazolotriazolylophosphates, preparation and uses thereof.
- 1880/Cal/73. Imperial Chemical Industries Limited. Manufacture of a smoking material. (31st August 1972).
- 1881/Cal/73. Imperial Chemical Industries Limited. Smoking material. (31st August 1972).
- 1882/Cal/73. The Rubber Research Institute of Malaya. Dispersable natural rubber. (17th August 1972).
- 1883/Cal/73. Investors In Ventures, Inc., Devices for controlling fluid flow in living creatures. (19th April 1973).
- 1884/Cal/73. The Monotype Corporation Limited. Pneumatic actuators. (7th September 1972).
- 1885/Cal/73. Dr. S. P. Sharma, B. K. Goyal, S. S. Jain and P. Mohan. A tension cell.  
16th August 1973
- 1886/Cal/73. The Fertilizer Corporation of India Limited. A temperature measuring instrument employing semiconductor diodes as temperature sensing element.
- 1887/Cal/73. The Lucas Electrical Company Limited. Spark ignition apparatus for internal combustion engines. (18th August 1972).
- 1888/Cal/73. Investors In Ventures, Inc. Method and device for reversibly interrupting fluid flow in a living being.
- 1889/Cal/73. Dunlop Limited. Method of moulding and apparatus therefor. (18th August 1972). [Addition to No. 133668].
- 1890/Cal/73. Gebr. Bohler & Co., Aktiengesellschaft. Improvements relating to a device for igniting a high frequency plasma burner.
- 1891/Cal/73. Burroughs Corporation. Multi-processing system having means for dynamic redesignation of unit functions.
- 1892/Cal/73. Burroughs Corporation. Method and apparatus for searching and adding records to a sequential file in a small computing system.
- 1893/Cal/73. Burroughs Corporation. Digital data copy duplication method and apparatus utilizing bit to bit data verification.
- 1894/Cal/73. Burroughs Corporation. Micro-program having an overlay micro-instruction.
- 1895/Cal/73. Lev Vasilievich Vasiliev and Elizbar Georgievich Buyanov. Voltage regulator.
- 1896/Cal/73. The Metal Box Company Limited. Method of closing a container and a pack obtained therefrom. (16th September 1970). [Divisional date 13th September 1971].  
17th August 1973
- 1897/Cal/73. Council of Scientific and Industrial Research. Preparation of porous polymeric composition of uncharged and charged types.
- 1898/Cal/73. Council of Scientific and Industrial Research. Improvement in or relating to ultrasonic atomiser.
- 1899/Cal/73. Colgate-Palmolive Company. Speckle particle for dentifrice.
- 1900/Cal/73. The General Tire & Rubber Company. A bendable elastomeric expansion joint.
- 1901/Cal/73. A. C. I. Operations Pty. Limited. Glass colour changes.
- 1902/Cal/73. Basf Aktiengesellschaft. Pesticide.
- 1903/Cal/73. Kores Holding Zug Ag. Improvements in or relating to copy writing material.
- 1904/Cal/73. Beloit Corporation. Apparatus and method for applying glue from a roller.
- 1905/Cal/73. Phillips Petroleum Company. Continuous slurry process for the formation of aromatic polycarboxylic acids.
- 1906/Cal/73. Combustion Engineering, Inc. Briquetting press.
- 1907/Cal/73. Burroughs Corporation. Input/output system for a microprogram divital computer, mable processor.
- 1908/Cal/73. Burroughs Corporation. A lsi program-mable processor.

## APPLICATION FOR PATENTS FILED AT PATENT OFFICE (BOMBAY BRANCH)

4th August 1973

- 258/Bom/73. Mohmed Iqbal, Abdur-Rehman Gokak. Device for antihijack measure in aircraft.

6th August 1973

- 259/Bom/73. Ahmedabad Textile Industry's Research Association. Optic-electronic slub-catcher device for textile yarn winding machines.

8th August 1973

- 260/Bom/73. Experto Industrial Engravers (P) Ltd. Improved typewriter with rotarv type case.
- 261/Bom/73. Experto Industrial Engravers (P) Ltd. Improved typewriter with flat type case.

9th August 1973

- 262/Bom/73. Shyam Manohar Pande. Air-cum-water cooler attachment of revolving type.
- 263/Bom/73. Hasambhai Hasambhai Mansuri, Yusufbhai Hasambhai Mansuri, Noormohmad Hasambhai Mansuri and Ismail Hasambhai Mansuri. Modification and improvement in manufaturing pickers used in textile industries.
- 264/Bom/73. Ramniklal Narandas Patel and Parshottam Bhavanbhai Gajjar. Improvement and modification in electrical pressing iron.

10th August 1973

- 265/Bom/73. Keshrikumar Chatrabhoj Nagda. Manufacture of paraldehyde from acetaldehyde using cation exchange resins.

13th August 1973

- 266/Bom/73. Ciba of India Limited. Process for the manufacture of nitroimidazoles.

APPLICATION FOR PATENTS FIELD AT THE  
PATENT OFFICE (MADRAS BRANCH)

7th August 1973

109/Mas/73. Maruthia Jayaraman. Rotary piston internal combustion engine.

8th August 1973

110/Mas 73. Sowri Raja Jayachandra Naidu. Chamois leather fuel filter.

111/Mas/73. Mrs. Aruna Kothari. Improved type of drop box picker for silkweaving machinery.

112/Mas/73. G. Sahani. Improved type of hub dynamo for bicycles.

9th August 1973

113/Mas/73. Shanmugasundram Venkatesan. Reinforced wood for floor panels.

13th August 1973

114/Mas/73. The South India Textile Research Association. A chemical method of interfacial polymerisation of polyesters and polyamides on the surface of cellulosic fibres to prolong their wear life.

115/Mas/73. Carborundum Universal Limited. A resilient polishing and/or grinding wheel.

## ALTERATION OF DATE

135435 (917/Cal/73). Ante-dated to 5th August 1971.

## COMPLETE SPECIFICATIONS ACCEPTED

Notice is hereby given that any person interested in opposing the grant of patents on any of the applications concerned, may, at any time within four months of the date of this issue or within such further period not exceeding one month applied for on Form 14 prescribed under the Patents Rules, 1972 before the expiry of the said period of four months give notice to the Controller of Patents on the prescribed Form 15, of such opposition. The written statement of opposition should be filed along with the said notice or within one month of its date as prescribed in Rule 36 of the Patents Rules, 1972.

A limited number of printed copies of the specifications listed below will be available for sale from the Government of India Book Depot, 8 Kiran Sankar Roy Road, Calcutta, in due course. The price of each specification is Rs. 2 (postage extra if sent out of India). Requisition for the supply of the printed specifications should be accompanied by the number of the specifications as shown in the following list.

Typed on photo copies of the specifications together with photo copies of the drawings, if any, can be supplied by the Patent Office, Calcutta on payment of the prescribed copying charges which may be ascertained on application to that office.

CLASS 32F<sub>1</sub>+32F<sub>2a</sub>+32J<sub>b</sub>. 83743NEW AMIDES OF PHARMACOLOGICAL INTEREST  
DERIVED FROM BENZYLAMINESCOUNCIL OF SCIENTIFIC AND INDUSTRIAL  
RESEARCH, OLD MILL ROAD, NEW DELHI-1,  
INDIA

Application No. 83743 filed August 16, 1962.

1 Claim

A process for the preparation of new amides represented by the formula (I) of the accompanying drawings

wherein, R<sub>1</sub> and R<sub>2</sub> denote H, chloro, alkyl, alkoxy or alkylendioxy radicals containing 1 to 6 carbon atoms R<sub>3</sub> and R<sub>4</sub> denote H, or alkyl groups having 1 to 6 carbon atoms Z stands for aliphatic alkylene straight or branched chain containing 1 to 6 carbon atoms and Y stands for dialkylamino group having 1 to 6 carbon atoms such as morpholine, piperidino, α, β or γ pipercoline, pyrrolidino, 1, 2, 3, 4-tetrahydroquinolino, 1, 2, 3, 4-tetrahydroisoquinolino with or without other alkyl or alkoxy substituents carrying not more than three carbon atoms, comprising interaction of the appropriate N-haloacylbenzylamine represented by formula (ii) of the accompanying drawings wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> and Z have the same meaning as stated above, with the desired dialkylamine or heterocyclic compound by refluxing in a suitable solvent such as benzene, toluene, alcohol or by employing one of the reactants itself as a solvent for a suitable length of time varying from 1 to 8 hours, and employing the boiling point of the reactant which has been employed as a solvent.

CLASS 32J<sub>C</sub>

83953

## IMPROVEMENTS IN OR RELATING TO THE PROCESS OF MANUFACTURE OF GLUCOSE CYCLO-ACETOACETATE (2-TETRAHYDROXY BUTYL 5-METHYL 4-CARBETOXY FURAN) OR GCA

REGISTRAR, NAGPUR UNIVERSITY, NAGPUR,  
MAHARASHTRA STATE, INDIA

Application No. 83953 filed August 31, 1962.

3 Claims—No Drawings

A process for preparing glucose cycloacetate which comprises reacting glucose D with ethyl acetoacetate in the presence of an acidic condensation catalyst such as zinc chloride in an organic solvent medium such as an alkanol.

CLASS 32F<sub>1</sub>+32F<sub>2b</sub>

85860

2, 3-SUBSTITUTED 4 (3H) QUINAZOLONES OF  
PHARMACOLOGICAL INTERESTCOUNCIL OF SCIENTIFIC AND INDUSTRIAL  
RESEARCH, OLD MILL ROAD, NEW DELHI-1,  
INDIA

Application No. 85860 filed December 31, 1962.

3 Claims

A process for the preparation of 2, 3-substituted 4 (3H) quinazolones represented by the general formula (I) of the accompanying drawings (wherein R, R<sub>1</sub> represent H, chlorine, alkyl, alkoxy or alkylendioxy groups containing not more than 3 carbon atoms, R<sub>2</sub> represents an alkyl group containing not more than 6 carbon atoms, R<sub>3</sub> represents H or alkyl group containing not more than 6 carbon atoms, R<sub>4</sub>, R<sub>5</sub> and R<sub>6</sub> represent halogen, alkyl, alkoxy or alkylene dioxy groups containing not more than 6 carbon atoms and in n stands for 1, 2, 3 and 4) which possess depressant action on the central nervous system, e.g., hypnotic action, decrease of locomotor activity, ganglion blocking action and antihistaminic action the said process comprising the condensation of an appropriately substituted or unsubstituted N-acyl anthranilic acid with an appropriately substituted or unsubstituted aralkylamine in presence of phosphorous trichloride employing toluene as a solvent at suitable temperatures varying from 110—140 for varying length of time from 1—4 hrs.

CLASS 32C and 55E<sub>1</sub>

94668

PROCESS FOR PREPARING A NEW POLYMORPHIC FORM OF LINCOMYCIN HYDROCHLORIDE THE UPJOHN COMPANY, OF 301 HENRIETTA STREET, KALAMAZOO, MICHIGAN, UNITED STATES OF AMERICA

Application No. 94668 filed July 13, 1964.

1 Claims

A process for preparing a new polymorphic form of lincomycin hydrochloride, the crystals of which are characterized by the X-ray diffraction pattern :

#### INTERPLANAR SPACINGS, Å

14.02\*  
10.52  
9.40  
8.53  
6.96  
6.19\*  
5.90  
5.55  
5.34  
5.15  
5.01  
4.62\*  
4.48  
4.26  
4.13  
4.04  
3.88  
3.67  
3.50  
3.45  
3.28  
3.02  
2.90  
2.76  
2.57

\*Major peaks

which comprises; adding acetone slowly to an aqueous solution of lincomycin hydrochloride at a temperature above about 25°C., and separating the crystals of the new polymorphic form of lincomycin hydrochloride thus produced.

CLASS 271

129979

IMPROVEMENTS IN OR RELATING TO STARTS AND ESCALATORS

ASHOK WASUDEO JOSHI AND SHAM RAM-CHANDRA BORAWAKE, OF JODHARAJ BHAWAN, SITABARDI, NAGPUR-1, STATE OF MAHARASHTRA, INDIA

Application No. 129979 filed Jan 18, 1971.

4 Claims

An improved stair having a series of steps constructed over a parabolic supporting surface, so that the travel line of the user of the said stair will be along a parabolic curve, instead of along a straight inclined plane as in conventional stair.

CLASS 70-B

130477

ELECTRODES FOR ELECTROCHEMICAL PROCESSES

IMPERIAL CHEMICAL INDUSTRIES LIMITED OF IMPERIAL CHEMICAL HOUSE, MILL BANK, LONDON, S.W. 1, ENGLAND

Application No. 130477 filed March 5, 1971.

Convention date March 18, 1970 (13035/70) U.K. Addition to No. 120458.

19 Claims—No Drawings

A method for the manufacture of an electrode for use in electrochemical processes, which comprises the step of (1) applying to a support formed from titanium or an alloy based on titanium and having anodic polarisation properties similar to those of titanium a layer of an operative electrode material as hereinbefore defined and (2) applying over the said layer a coating comprising an alkyl titanate, an alkyl polytitanate or an alkyl halotitanate in which the halogen is chlorine, bromine or fluorine in a liquid vehicle and heating the coating at 250-800°C so as to convert the titanate compound to titanium dioxide, and is characterised in that the sequence of the steps (1) and (2) is carried out a plurality of times.

CLASS 32F<sub>3</sub>b

130858

A PROCESS FOR THE EXTRACTION OF CATECHINS DIRECTLY FROM THE HYDRAULIC PRESS

"KATT HA-LONDI"

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH, RAFI MARG, NEW DELHI—1, INDIA

Application No. 130858 filed April 6, 1971.

3 Claims—No drawings

A process for the extraction of catechins directly from the hydraulic press "kattha-londi", as herein defined wherein "kattha-londi" is shaken several times/warmed with solvent ether (diethyl ether) containing 5% of ethanol, the ether extract is warmed to distil off the solvent, the residue is warmed with acid-water, cooled, seeded, and kept in a cool and dark place to crystallize out the catechins, which is filtered out, washed with acid-water, dried, rubbed down in a pestle and mortar and bottled.

CLASS 167D.

131103.

PNEUMATIC SEPARATOR WITH RE-CIRCULATION OF AIR

IMASCO LIMITED OF 4 WESTMOUNT SQUARE, MONTREAL 216, QUEBEC, CANADA

Application No. 131103 filed on April 24, 1971.

14 Claims

A pneumatic separator for separating lighter particles from heavier particles comprising, a separating chamber, means for circulating air upwardly through said chamber, an inlet impeller for thrusting particles to be separated into and across the chamber means for collecting and carrying the heavier particles from the chamber, means for separating the lighter particles from the upwardly circulating air, means for recirculating the air from the upper end of the separating chamber to the lower end thereof, and an air jet impeller in said separating chamber for thrusting the heavier particles, and any lighter particles entrained therewith, across the chamber in a direction opposite to the direction in which the inlet impeller thrusts the particles, to effect a secondary stage of separation.

CLASS 4-A-3.

131497.

DEVICE FOR RESTORING THE RETRACTABLE BARRIER AFTER ARRESTING AN AIRCRAFT BORGES FABRIKS AKTIEBOIAG, OF NORRKOPING, SWEDEN

Application No. 131497 filed May 26, 1971.

3 Claims

Device for use in conjunction with retractable barriers for arresting aircraft, in which during the arresting process a band or line is unwound from an absorbant (16) with band or line magazine, whereby the barrier is restored to the arresting position after the arresting process, for which purpose a plurality of pumps or compressor (2, 3) are connected to the absorbant, the said pump or compressors being connected to hydraulic or pneumatic accumulators (10) for the accumulation of energy, whereby the device is fitted with hydraulic and pneumatic motors respectively driven by the accumulated energy for rewinding the retractables barrier-characterized in that the shaft (1) of the absorbant (16) is connected to said motors and pumps, which are fitted with feed lines (6, 7) for passage of drive fluid from the accumulator (10) on closing the control valve (11), said feed lines being interconnected by a line (12) incorporating a construction point (13), said line (12) after the construction point with respect to the direction of flow being fitted with a line (14) for drawing the fluid from a tank (4).

Class 150F

131500

A METHOD OF SCALING A PIPE JOINT AND THE PRODUCT THEREOF.

AVON RUBBER COMPANY LIMITED, OF MELKSHAM, WILTSHIRE, ENGLAND.

Application No. 131500 filed May 26, 1971.

Convention date May 27, 1970 (25593/70) U.K.

7 Claims.

A method of sealing a pipe joint comprising (a) placing a solid sealant material at a joint between two pipes when in their intended positions; (b) heating the material; (c) fitting a removable pressing mould around at least one of the pipes; (d) applying pressure to one face of the material by moving a portion of the mould axially along one of the pipes, to force the material against the joint and impose on the material the configuration of the mould portion, steps a, b, c and d being performed in any order except that a must precede; (e) maintaining the mould portion in contact with the material until a seal is assured as a result of the heating of the material and (f) removing the mould.

Class 183.

131617.

IMPROVEMENTS IN OR RELATING TO SPOONS, FORKS AND THE LIKE

MRS. NARGIS SAMY ENGINEER, CROWN BUILDING, URANWALLA STREET, GRANT ROAD, BOMBAY-7, MAHARASHTRA, INDIA.

Application No. 131617 filed June 5, 1971.

4 Claims.

A spoon or fork characterised in that consists of a handle member which is rigidly formed or pivotally mounted at an angle varying from 10° to 90° inclined to the horizontal line of the shallow bowl forming the

spoon or the fork member for being conveniently handled by a child or old aged people or invalids.

Class 86-B.

131631.

IMPROVED CHAIR, STOOL AND THE LIKE WITH HEIGHT ADJUSTING MECHANISM.

YADAV ENGINEERING WORKS, 40, SHIVAJI UDYAM NAGAR KOLHAPUR, MAHARASHTRA STATE, INDIA.

Application No. 131631 filed June 7, 1971.

2 Claims.

An improved chair, stool and the like with height adjusting mechanism comprising three or four legged assembly fixed to a central boss having internal threads, a hollow central pillar and a spindle coaxially mounted on the said central pillar and capable of being raised or lowered; the said spindle carries at its top a revolving or fixed seat of the chair or the stool, characterised in that the said spindle is provided with a longitudinally extending depression or recess, the said depression or recess being shallow at the top and being slightly deeper towards bottom, there being further provided a locking screw with a knob being housed in the hollow body of the said central pillar which being engageable to the said recess for locking the spindle.

CLASS 34A.

131914.

IMPROVED PROCESS AND EQUIPMENT FOR THE MANUFACTURE OF POLYESTER

VEB CHEMIEANLAGENBAU LEIPZIG, OF 7024 LEIPZIG, TORGAUR STR. 65, GERMAN DEMOCRATIC REPUBLIC

Application No. 131914 filed June 29, 1971.

2 Claims

In a process for the continuous manufacture of polyester by esterification of terephthalic acid with glycol followed by subsequent condensation and charging or feeding of additives especially matting medium characterized in that said additives especially matting medium is sprayed as suspension onto a flowing film of the condensed product under vacuum operated condensing stage of the said polymer process and thereafter subjecting the sprayed film to homogenous mixing.

CLASS 194C<sub>11</sub>

132015

ELECTRON PRODUCING APPARATUS ENERGY SCIENCES, INC. OF 111 TERRACE HALL AVENUE, BURLINGTON, MASSACHUSETTS, USA.

Application No. 132015 filed July 7, 1971.

7 Claims

An electron-producing apparatus having, in combination, an anode and a cold, high-current field emission cathode; means for applying voltage pulses between the anode and cathode sufficient to draw impulses of high emission current directly from the cold cathode, the external cathode surface facing the anode being subject to the removal of an inherent electron-ion plasma layer thereupon by the application of said pulses, exposing the cathode material itself to destruction upon the continued application of said pulses; and means for effectively providing a continual plasma replacement layer upon said external cathode surface comprising means for continually supplying to said surface a low atomic number low ionization-potential gas readily absorbable upon said surface.

CLASS 25C, 27, 1--K and 136E 132033  
CONSTRUCTION ELEMENT MADE OF REIN-  
FORCED PLASTICS

RAYMOND CAMUS, OF 27, AVENUE FOCH, 75-  
PARTS 16, FRANCE

Application No. 132033 filed July 8, 1971.

20 Claims

A construction element comprising a core or body of cellular plastics material bounded on at least one of its faces to a covering of resin reinforced with fibres, characterised in that the core is of expanded plastics material having a hardened foam structure and in that reinforcing members not pre-tensioned of the type used for reinforced concrete are provided at the junction between the covering and the core, said members being bounded to the covering and the core by the resin of said covering.

CLASS 56C and 182C 132099  
SUGAR CRYSTALLISATION NUCLEATING COM-  
POSITION AND METHOD FOR THE PREPARATION  
THEREOF

BATTELLE DEVELOPMENT CORPORATION, OF  
505 KING AVENUE, COLUMBUS, OHIO, UNITED  
STATES OF AMERICA

Application No. 132099 filed July 13, 1971.

6 Claims

A method of preparing a sugar crystallization nucleating composition having at least 50% of single crystal sucrose nuclei comprising adding a low molecular weight polar organic compound selected from the group consisting of aliphatic ethers, esters, ketones, alkanols and mixtures thereof to a sucrose feed syrup having substantially no solid phase sucrose and comprising sucrose and water and wherein the amount of organic compound added is sufficient to form an organic compound; water weight ratio of between about 0.6 : 1 and about 3 : 1 respectively, mixing the components until steady state conditions are achieved, and recovering the resulting product.

CLASS 130D and I 132146  
A PROCESS FOR EXTRACTING METAL VALUES  
FROM DEEP SEA NODULES  
KENNECOTT COPPER CORPORATION, OF 161  
EAST 42ND STREET, CITY AND STATE OF NEW  
YORK, UNITED STATES OF AMERICA

Application No. 132146 filed July 17, 1971

7 Claims

A process for extracting copper, nickel, cobalt, and molybdenum from ores, for example, deep sea nodules wherein iron, copper, nickel, cobalt and molybdenum are present as oxides or mixed oxides, and manganese is present as manganese dioxide, comprising the steps of reducing the nodules with gaseous reducing agents in a temperature range of from 250 to 900°C, to produce nodules containing substantially all the manganese in manganous form and essentially free of metallic iron, leaching the reduced nodules with an aqueous solution of an ammonium salt and ammonia, whereby the copper, nickel, cobalt and molybdenum are selectively removed from the nodules while the manganese and iron remain in the nodule residue, separating from the residue a rich leach solution which contains copper, nickel, cobalt and molybdenum but is free of iron and manganese in solu-

tion, and recovering the copper nickel, cobalt and molybdenum from the leach solution.

CLASS 32E and 152E 132177

PROCESS FOR THE PRODUCTION OF PHENOL-  
ALDEHYDE FOAMED PLASTICS  
VLADIMIRSKY NAUCHNO-ISSLEDOVATELSKY IN-  
STITUT SINTEKHESKIKH SMOL, OF VLADIMIR,  
ULITSA FRUNZE, 77, USSR

Application No. 132177 filed July 20, 1971.

11 Claims—No drawings

A method of producing foamed plastics based upon phenolaldehyde condensation products with or without a foaming agent, a surface-active agent and other conventional adjuvants as herein described and proportioning the foaming reaction mixture into spaces which is characterised by foaming a liquid mixture comprising (1) condensation products of phenol aldehyde of the novolak type or condensation products of the chemical equivalents of the reactants as herein described, (2) condensation products of phenol aldehyde of the resole type or condensation products of the chemical equivalents of the reactants as herein described or aldehydes and (3) an acidic agent and allowing the said mixture to foaming at around room temperatures or if desired at temperatures upto 100°C.

CLASS 13A and 128F 132287

AN IMPERFORATE, FLEXIBLE, NON-PERMEABLE  
BAG.

IMS LIMITED, OF 408 SOUTH SPRING STREET,  
LOS ANGELES, CALIFORNIA 90013, UNITED  
STATES OF AMERICA

Application No. 132287 filed July 28, 1971.

2 Claims

An imperforate flexible non-form retaining, generally rectangular, transparent, non-permeable bag containing a vial and a vial injector having a lengthwise dimension substantially greater than its lateral dimension, said bag being adapted to maintain said contents in aseptic condition prior to opening, said bag having heat seals coextensive with both of its lengthwise edges, said bag having a slit in a lengthwise edge in proximity to one end thereof so that upon lateral ripping, one end of the bag is completely removed to permit removal of the vial and vial injector by simple dumping force, said slit being substantially perpendicular to the lengthwise edge of said bag, the interior of said bag being separated from said slit by a seal, said slit and its seal extending inwardly of said heat seals at the lengthwise edges.

CLASS 32E 132305

PROCESS FOR PREPARING COLORLESS, HIGH-  
VINYL DIENE POLYMERS

THE FIRESTONE TIRE & RUBBER COMPANY, OF  
1200 FIRESTONE PARKWAY, AKRON, STATE OF  
OHIO 44317, UNITED STATES OF AMERICA

Application No. 132305 filed July 30, 1971.

6 Claims—No drawings

A process for solution polymerizing a conjugated diene which comprises carrying out the polymerization with an alkali metal hydrocarbon catalyst such as herein described as initiator and in the presence of dimethylether in a proportion of at least 10 parts by weight per 100 parts

by weight of polymerizable monomer, the temperature of polymerization being maintained no higher than 100°F. primarily by vaporizing dimethylether, condensing and cooling the same and returning the cooled condensate to the polymerization reactor at a rate sufficient to maintain the temperature below 100°F., said dimethylether serving as solvent, catalyst modifier and temperature control agent.

CLASS 174F 132322

VIBRATION DAMPER FOR CABLES  
DULMISON (AUSTRALIA) PTY. LIMITED, OF  
27-39 CHISHOLM ROAD, SEFTON, IN THE STATE  
OF NEW SOUTH WALES

Application No. 132322 filed August 2, 1971.

Convention date August 7, 1970 (2096/70) Australia.  
7 Claims

A stockbridge vibration damper for cables comprising at least one weight of right cylindrical shape in combination with at least one additional weight adapted to be attached removably to the outer surface of said elongated weight at any selected region along the length of the major axis of each said elongated weight.

CLASS 40F and 201D 132697

A PROCESS FOR TREATING AN INPUT WATER  
STREAM CONTAINING A WATER SOLUBLE  
SULFITE COMPOUND

UNIVERSAL OIL PRODUCTS COMPANY, No. 30  
AIGONGUIN ROAD, DES PLAINES, STATE OF  
ILLINOIS, UNITED STATES OF AMERICA

Application No. 132697 filed August 28, 1971.

19 Claims

A method for treating an input water stream containing a water-soluble sulfite compound in order to reduce its total sulfur content while minimizing the formation of sulfate by-products, said method comprising the steps of (a) reacting the input water stream with a reducing agent selected from the group consisting of finely divided sulfur, a polysulfide compound, a water soluble sulfide compound and mixtures thereof, to form a thiosulfate-containing effluent stream, (b) catalytically treating with a catalyst comprising a metallic component selected from the group consisting of chromium, molybdenum, tungsten, iron, cobalt nickel, palladium and platinum, combined with a suitable carrier material the effluent stream from step (a) with hydrogen to produce a thiosulfate free aqueous effluent stream containing a sulfide compound and thereafter (c) stripping hydrogen sulfide by fractional distillation from the aqueous effluent stream produced in step (b) to form a sulfate-free treated water stream which is reduced in total sulfur content relative to the input water stream.

CLASS 39B+P+E and 40F 132741

METHOD OF RECOVERING CHEMICALS IN  
WASTE LIQUORS AND APPARATUS FOR CARRY-  
ING OUT THE METHOD

SVENSKA CELLULOSA AKTIEBOLAGET, OF  
SKEPPARPI ATSEN 1, SUNDSVALL, SWEDEN

Application No. 132741 filed September 1, 1971

16 Claims

In a process for recovering chemicals as herein described from waste liquors obtained by digestion of lignocellulosic materials in which said liquor is concentrated

to a dry content of at least 45% and then introduced into a reactor in finely divided form together with a gas containing free oxygen and heated to a temperature of at least 600°C., said liquor being pyrolyzed in the reactor in a reducing atmosphere to obtain pyrolysis products including a residue containing sodium carbonate substantially free of sulfides and a pyrolysis gas containing hydrogen sulfide, the improvement comprising cooling the pyrolysis product to a temperature of 150—500°C, immediately after the pyrolysis, by direct heat exchange with water injected into said pyrolysis products, separating the cooled pyrolysis products in cascade scrubbers into solid residue products and gaseous products, the sodium carbonate being dissolved in water and reacted with a portion of the hydrogen sulfide in the gaseous pyrolysis product and recirculating the soda containing sulfide to a causticizing plant.

CLASS 176E and F 132991

IMPROVEMENTS IN INDUSTRIAL BOILERS  
G.W.B. BOILERS LIMITED, OF BURTON WORKS,  
DUDLEY, IN THE COUNTRY OF WORCESTER,  
ENGLAND

Application No. 132991 filed September 21, 1971.

Convention date September 22, 1970 (44973/70)  
U.K.

14 Claims

An industrial boiler including a combustion chamber, a fluid fuel fired burner to cause combustion of said fluid fuel in said combustion chamber, a grate contained in said combustion chamber, air supply means for delivering air to said combustion chamber, feed means for feeding solid fuel to said combustion chamber so as to fall towards said grate and control means operable to control supply of fluid fuel to said burner and solid fuel by said feed means, said control means including a first sensing means to detect the presence of combustion of both fluid fuel and solid fuel, said first sensing means being effective to control operation of said feed means to control feed of solid fuel to said combustion chamber and to control supply of fluid fuel to said burner, and a second sensing means to detect the presence of combustion of the fluid fuel alone, said second sensing means being effective to control supply of fluid fuel to said burner, whereby said burner can operate whilst the feed means is inoperative, said feed means can operate whilst the burner is inoperative and said burner can operate whilst said feed means is operative

CLASS 55A and 170B 132998

FOAMING JAVEL WATER AND A METHOD OF  
PREPARING THE SAME

FRANCIS MOREAU, AT B. P. 1885, ABIDJAN,  
IVORY COAST, AFRICA

Application No. 132998 filed September 21, 1971.

9 Claims—No drawings

Foaming javel water characterized in that it consists of a mixture of javel water and a liquid detergent.

CLASS 154-A 133005

PLASTIC RELIEF IMAGE PRINTING PLATE  
EMULSION

DYNA-FLEX CORPORATION, OF 2300 SOUTH 3600  
WEST SALT LAKE CITY, UTAH, UNITED STATES  
OF AMERICA

Application No. 133005 filed September 22, 1971.

5 Claims—No drawings

A plastic relief image printing plate emulsion comprising a polymer of the acetal group forming a base for

the emulsion and comprising the largest percentage, by weight, of the said emulsion; a polyvinyl alcohol providing water soluble characteristics to the emulsion even said light hardened emulsion is not water soluble said comprising not more than about 6% by weight of the emulsion; a dichromate providing hardening characteristics to the said emulsion in the presence of actinic light whereby said light hardened emulsion is not water soluble said dichromate comprising not more than about 0.3% by weight of the emulsion, and a plasticizer providing malleability characteristics to said emulsion even after said emulsion has hardened said plasticizer comprising not more than about 1.5% by weight of the emulsion.

CLASS 98D and 180. 133143

#### A FIRED HEATER.

FOSTER WHEELER LIMITED, OF FOSTER WHEELER HOUSE, CHAPEL STREET, LONDON, N. W. 1, ENGLAND.

Application No. 133143 filed October 6, 1971.

9 Claims.

A fired heater having a heated enclosure through which tubes pass which are arranged to carry process streams to be heated, the tubes being supported at one or more intermediate points along their run by passing through, and being supported by, a pair of spaced parallel plates, these plates defining between themselves a zone to which hot gases within the heated enclosure do not have access and through which cooling air can pass, the plates being protected from high temperatures from within the heated enclosure by being provided with refractory insulation on their sides facing the interior of the enclosure.

CLASS 83A<sub>1</sub>+A<sub>3</sub>. 133277

#### A BLUE CHEESE FROM SOYA BEAN MILK AND METHOD OF PREPARATION THEREOF.

THE HONG KONG SOYA BEAN PRODUCTS CO., LTD., OF 52-54, HOI YUEN ROAD, KWUN TONG, KOWLOON, HONG KONG.

Application No. 133277 filed October 19, 1971.

5 Claims—No drawings.

The method of preparing a cheese with the flavor, structure, taste and characteristic blue veins of Roquefort cheese from soya bean milk which comprises forming a mixture by adding to soya bean milk of 1—10% solid content, 1—10% butter fat and 0.2—2.5% of skim milk solids, pasteurizing at 185°—200°F., coagulating the mixture, heating to about 140—170°F., and draining the curd until the water content is 60—80%, whereby soya bean base curd is obtained, inoculating said soya bean base curd with a viable culture of *Penicillium roqueforti* and allowing ripening to occur.

CLASS 54. 133298.

#### IMPROVEMENTS IN THE PREPARATION OF COLD TEA EXTRACTS. CEYLON INSTITUTE OF SCIENTIFIC AND INDUSTRIAL RESEARCH, OF 363 BAUDDHALOKA MAWATHA, COLOMBO 7, CEYLON

Application No. 133298 filed October 21, 1971.

Convention date January 22, 1971 (6636/71) Ceylon.

7 Claims—No drawings.

A method for the preparation of cold tea extracts comprising adding to the hot tea infusion (60°C—110°C) any one or more of the following compounds, in concentration of the order of 0.01%—5% (by weight in grammes per 100 millilitres of the tea extract):—Carbo-

nate, bicarbonate, hydroxide, oxide, phosphate, polyphosphate, citrate, borate, and silicate of ammonium or lithium or sodium or potassium or magnesium or calcium.

CLASS 32F<sub>1</sub>. 133356.

#### FERMENTATION PROCESS FOR THE PRODUCTION OF CITRIC ACID. PFIZER INC., OF 235 EAST 42ND STREET, NEW YORK 17, NEW YORK, UNITED STATES OF AMERICA.

Application No. 133356 filed October 26, 1971.

6 Claims—No drawings.

A process for producing citric acid which comprises propagating a citric acid-accumulating yeast strain of a genus selected from the group consisting of *Rhodotorula*, *Sporobolomyces*, *Nematospora*, *Zygosaccharomyces* and *Torula* under aerobic conditions in an aqueous carbohydrate-containing medium until a level of at least about 1 gram of citric acid accumulates per liter of said medium, and recovering said citric acid.

CLASS 15D and 94A. 133361.

#### A ROTARY DRUM AND A TUBE MILL INCORPORATING THE SAME

F. L. SMITH & CO., A/S, OF 77 VIGERSLEV ALLE, DK-2500 COPENHAGENVÅBY, DENMARK.

Application No. 133361 filed October 26, 1971.

Convention date October 28, 1970 (51273/70) U. K.

13 Claims.

A rotary drum having at least one end an axial trunnion supported in a sliding contact bearing, wherein the surfaces of contact of the trunnion and the bearing are part-spherical.

CLASS 186F AND 206B+G. 133383.

#### IMPROVEMENTS IN TELEVISION SYSTEMS.

INTERNATIONAL STANDARD ELECTRIC CORPORATION, OF 320 PARK AVENUE, NEW YORK 22, NEW YORK, UNITED STATES OF AMERICA.

Application No. 133383 filed October 27, 1971.

Addition to No. 129186.

3 Claims.

For a system as defined wherein a time-compressed audio signal is transmitted as an inverted sideband of a subcarrier frequency, a television receiver as defined including a storage device and a synchronous demodulator controlled by the subcarrier frequency, said demodulator being arranged to receive said time-compressed signal and to produce an output signal to be stored in the storage device.

CLASS 32F<sub>1</sub>+32b. 133456.

#### PROCESS FOR MANUFACTURE OF THIENYLALKAN DERIVATIVE.

DEUTSCHE GOLD-UND SILBER-SCHNEIDEN-STALF VORMALS ROESSLER, OF 9 WEISSFRAUEN-STRASSE, FRANKFURT (MAIN), FEDERAL REPUBLIC OF GERMANY.

Application No. 133456 filed November 3, 1971.

6 Claims.

Process for manufacture of thienylalkan derivatives of general formula I, wherein the thienylrest can be substituted one or more times by low-molecular alkylresidues, A



represents a Thienyl or Phenyl residue, which can be substituted by a low-molecular alkyl- or Alkoxy groups,  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and  $R_5$  represent hydrogen or low-molecular or alkyl groups,  $R_6$  represents hydrogen or a hydroxyl group, and the residues  $R_7$  and  $R_8$  which may be same or different, represent hydrogen, hydroxy groups, halogen atoms, lower molecular alkyl groups, low molecular halogenalkyl groups or low molecular alkoxy groups, their optically active, or diastomeric forms and their salts characterised thereby that compounds of the general formula II or their salts where Ar and  $R_1$  to  $R_8$  are as defined earlier and wherein  $7A=BR_{11}$  has the structure  $>C=CR_{11}$  or  $>C(OH)-CHR_{11}$ , are treated with known reducing agents if desired in presence of known dehydrogenating substances, and the so obtained products are converted if desired into their acid salts.

CLASS 163-B., 133568.

IMPROVEMENTS RELATING TO GEAR PUMPS.  
SRINIVASAN MANI, GROUND FLOOR, 130/B,  
JODHPUR PARK, CALCUTTA-31, WEST BENGAL,  
INDIA.

Application No. 133568 filed November 10, 1971.

6 Claims.

A gear pump suitable for high pressure use comprising a housing having two parallel and overlapping bores, two rotors having intermeshing gear toothed portions arranged to turn in the respective bores and having shaft portions extending from opposite ends of both gear toothed portions through bearings, the bearings at one end of the gear toothed portions being provided by axially movable bearing bushes, each axially movable bearing bush being formed at its end remote from the gear toothed portion with a transverse face which is spaced from the end of the bore and with a neck which extends from said transverse face towards said end of the bore and a resilient sealing ring mounted on the neck of each movable bearing bush in axial compression between said transverse face and the end of the bore, said rings provided such that to separate an area at the end of the bearing bush and outside the sealing ring which is subject to pump delivery pressure from an area at the end of the bearing bush and inside the sealing ring which is subject to pump inlet pressure, the spacing of the resilient sealing ring from the bore periphery adapted to vary around the neck and is at a minimum on the low pressure side of the pump.

CLASS 126D and 206E. 133649

THYRISTOR, RECTIFIER AND DIODE TESTER.  
THE UNIVERSITY OF ROORKEE, ROORKEE, U.P.,  
INDIA, AN INDIAN UNIVERSITY.  
Application no. 133649 filed November 17, 1971.

9 Claims.

A tester for testing a thyristor (silicon controlled rectifier), rectifier or diode, comprising of one stepdown transformer having one primary and three separate secondary coils, two sets of bridge rectifiers with filters connected to two of the said secondary coils to give d.c. outputs and the third secondary coil giving a.c. output; one of the said d.c. outputs being connected to a lamp circuit, the other being connected to a biasing circuit and the a.c. output being connected to a pulse circuit, characterised by that the said lamp which glows to prove perfect test conditions is connected in series with the collector of its driving transistor, where the said biasing circuit has a resistance-selector bandswitch at its collector in series with it, in order to select its collector current, the said pulse circuit having a zener diode to give a steady base-bias put through a capacitor and a resistance, an ordinary diode being placed with its cathode connected to the base and anode to the emitter of the biasing transistor and this

pulse circuit is connected with the test selector switch in a way such that its position 1 corresponds to instrument check test, position 2 reverse leakage test, position 3 conduction/trigger test and position 4 forward leakage test.

CLASS 83A., 133658.

PROCESS FOR THE PREPARATION OF A MELTABLE HEAT STABLE CURD FROM SOYA BEAN MILK.

THE HONG KONG SOYA BEAN PRODUCTS CO.,  
LTD., 52-54, HOI YUEN ROAD, KWUN TONG, KOW-  
LOON, HONG KONG.

Application No. 133658 filed November 17, 1971.

10 Claims—No drawings.

The process of preparing a meltable heat-stable curd from soya bean milk which comprises preparing soya bean milk of solid content between 1 and 10% by weight, adding thereto an edible fat in amount of at least 1% by weight, pasteurizing, homogenizing, adding a coagulant to induce curd formation and heating to 60°C—76°C, draining the resulting curd until the moisture content is 60—80%.

CLASS 32F, 133675.

PROCESSES FOR THE PREPARATION OF N-(DIETHYLAMINO-ETHYL)-4-AMINO-5-CHLORO-2-METHOXYBENZAMIDE.

YAMANOUCHI PHARMACEUTICAL CO., LTD., NO.  
5-1, 2-CHOME, NIHONBASHI-HONCHO, CHUO-KU,  
TOKYO, JAPAN.

Application No. 133675 filed November 19, 1971.

3 Claims.

A process for the production of N-(diethylaminoethyl)-4-amino-5-chloro-2-methoxybenzamide from p-aminosalicylic acid, characterized in that p-aminosalicylic acid (I) is reacted with a methylating agent under anhydrous conditions to give methyl 4-amino-2-methoxybenzoate (II), which is then submitted, in random order, to chlorination with phenyliododichloride, amidation with N, N-diethylethylene diamine and, if desired hydrolysis by means of an alkaline hydroxide of the methylester group before or after the chlorination, in which case phosphorus trichloride is used along with N, N-diethylethylenediamine in the amidation step.

CLASS 32A., 133710.

PROCESS FOR THE MANUFACTURE OF COPPER COMPLEX MONOAZO DYESTUFFS

FARBWERKE HOECHST AKTIENGESSELLSCHAFT  
VORMALS MEISTER LUCIUS & BRUNING, OF 45,  
BRUNINGSTRASSE, FRANKFURT/MAIN, FEDERAL  
REPUBLIC OF GERMANY.

Application No. 133710 filed November 23, 1971.

6 Claims.

A process for the manufacture of a copper-complex monoazo dyestuff of the general formula (i) of the accompanying drawings, in which X represents a grouping of the formula (2) or (3) in which Z represents a hydroxyl group or an inorganic or organic radical capable of being split off by alkaline agents, which comprises reacting an azo compound of the formula (4) in which X is defined as above and R represents a hydroxyl group or a low alkoxy group, with a copper yielding agent such as a copper salt of an inorganic or an organic acid such as copper carbonate, copper sulfate, copper acetate in a neutral or slightly acid aqueous medium at a temperature in the range of from 0° to 100°C, and converting the dyestuff obtained of the formula (5) by esterification with an acid into the corresponding dyestuffs of the formula (1) having the grouping of the formula (2) in which Z represents a radical of an acid capable

of being split off by inorganic alkaline agents to obtain the corresponding vinylsulfone compound.

CLASS 27M. 133731.

#### EXPANDABLE SPACE FRAME

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION NASA HEADQUARTERS, WASHINGTON, D. C., UNITED STATES OF AMERICA.

Application No. 133731 filed November 24, 1971.

12 Claims.

An expandable space-frame comprising a plurality of hinge joint assemblies having arms that extend outwardly in predetermined symmetrically equivalent directions, the outer ends of said arms forming a portion of a hinge; and a plurality of struts having outer ends that form the other portion of said hinge, said plurality of struts being connected between said plurality of hinge joint assemblies whereby an essentially infinite periodic space-frame is formed.

CLASS 206E. 133858.

#### IMPROVEMENTS IN AND RELATING TO SEMI-CONDUCTOR DEVICES.

N. V. PHILIPS' GLOEILAMPENFABRIEKEN, AT AMMASINGEL 29, EINDHOVEN, HOLLAND.

Application No. 133858 filed December 6, 1971.

Convention date December 9, 1970 (58478/70) U.K.

19 Claims

A semiconductor device having a semiconductor body comprising at least one resistor having a resistance region of one conductivity type adjacent a surface of the body and forming a *p-n* junction with the adjacent body portion of the opposite conductivity type characterized in that implanted neutral ions and associated semiconductor crystal lattice damage are present in the resistance region at least in the vicinity of the said *p-n* junction in such a high concentration as to significantly improve the voltage linearity of the resistor.

CLASS 172C7. 133929

#### COTTON GIN RIB. FORMERLY

JAMES ELLAS NAYFA, FORMERLY OF 1209 LEVEE STREET DALLAS, STATE OF TEXAS, UNITED STATES OF AMERICA, AND NOW OF 5015 SHARP STREET, DALLAS, STATE OF TEXAS, UNITED STATES OF AMERICA.

Application No. 133929 filed December 13, 1971.

8 Claims.

In a cotton gin having a series of rotating saws operating between a series of spaced ribs for detaching cotton fibers from seed, the said ribs each having a roller assembly rotatably attached thereto at the ginning point thereon, the said roller assembly comprising a non-friction bearing arrange in the upper portion of each rib and having a pair of disks supported therein and rotative on opposing adjacent faces of said ribs, each disk having a series of serrations formed peripherally of each disk, the said series of serrations having their peaks directed counter to the rotation of said disks.

CLASS 32B.

133969.

#### PROCESS FOR THE RECOVERY OF ISOPRENE FROM MIXTURES CONTAINING THE SAME.

SNAM PROGETTI S. p. A., OF 16 CORSO VENEZIA, MILAN, ITALY.

Application No. 133969 filed December 16, 1971.

8 Claims.

A process for the recovery of isoprene from a feed mixture constituted at least mainly by hydrocarbons having 5 carbon atoms and including isoprene, which process comprises the following steps:—(a) feeding to a first extractive distillation column the feed mixture and a first solvent mixture which contains water and is selective amongst  $C_5$  hydrocarbons, (b) discharging from the first extractive distillation column an overhead product as herein defined which includes monoolefinic and/or saturated hydrocarbons originally present in the feed; (c) feeding a bottom product as herein defined from the first extractive distillation column, which bottom product includes the first solvent mixture, to a second extractive distillation column; (d) withdrawing as a sidestream from the second extractive distillation column a major part of any cyclopentadiene and of any acetylenic compounds originally present in the feed mixture; (e) recovering as a bottom product of the second extractive distillation column the first solvent mixture; (f) recycling the recovered first solvent mixture to the first and second extractive distillation columns; (g) feeding to a third extractive distillation column an overhead product of the second extractive distillation column and a second solvent mixture which contains water, is selective amongst  $C_5$  hydrocarbons and may be the same as or different from the first solvent mixture; (h) discharging, as an overhead product, from the third extractive distillation column a stream containing isoprene, which stream is optionally subjected to rectification so as to purify the isoprene: (i) subjecting the bottom product of the third extractive distillation column to stripping in a stripping column so as to recover the second solvent mixture which is recycled to the third extractive distillation column; (j) removing any dimers and oligomers formed from a lower region of the stripping column; (k) discharging as a sidestream from the second extractive distillation a stream containing essentially isoprene, cyclopentadiene and acetylenic compounds, and either (1) discharging this stream, or (2) dimerizing in a manner such as herein described the cyclopentadiene in this stream separating the resulting dicyclopentadiene, separating the acetylenic compounds from the stream, and recycling the isoprene to the first extractive distillation column; and (1) discharging as an overhead product from the stripping column a stream containing essentially isoprene, cyclopentadiene and acetylenic compounds, and either (1) recycling this stream to the second extractive distillation column, or (2) discharging this stream, or (3) dimerizing in a manner such as herein described, the cyclopentadiene in this stream, separating the resulting dicyclopentadiene, separating the acetylenic compounds from this stream, and recycling the resulting isoprene stream to one of the extractive distillation columns.

Class 101-F and 156-E-F.

133980.

#### DEVICE FOR INSTANTANEOUS RELIEF FROM WATER HAMMER.

SUBHASH SHANKAR MARAHTA B. E. (CIVIL), 759/106, DECCAN GYMKHANA, PRABHAT ROAD, 3RD LANE, POONA 4, MAHARASHTRA STATE INDIA.

Application N. 133980 filed December 17, 1971.

2 Claims.

A device to afford instantaneous relief from water hammer in a rising main connected to a sump well or

reservoir through a pump said device comprising a tee branch adapted to be connected by one of its branches to the pump and by another of the branches to the beginning of the rising main, the third branch being connected to one end of a pipe adapted to be connected to the sump well at its other end, a diaphragm made of a metal, non-metal or composite material located at said other end of said pipe and closing said pipe; the middle portion of the diaphragm being provided on each of its sides with a thick metallic disc to reinforce the thin diaphragm, the discs being of a diameter less than that of the diaphragm so as to leave a clearance of 0.5 mm or less to provide circular shearing edge capable of yielding to the excessive pressure developed due to water hammer to cut the diaphragm to throw open the tee branch to let the water return to the said sump well.

CLASS 32E. 134490  
PROCESS FOR THE POLYMERIZATION OF AN OLEFINE AT HIGH PRESSURE IN TUBULAR REACTORS.

SNAM PROGETTI S. P. A., OF 16 CORSO VENEZIA, MILAN, ITALY.

Application No. 134490 filed February 3, 1972.

#### 11 Claims

A process for polymerizing an olefin at high pressure, which comprises polymerizing the olefin compressed to a pressure in the range from 1000 to 5000 atmospheres, in the presence of a polymerization promoter in a reaction zone of a tubular reactor, and separating the resulting polyolefin from the reaction product which includes unreacted olefin, characterised in that the reaction product comprising polyolefin, unreacted olefin and other compounds present in the reaction zone are, prior to said separation, continuously expanded through an expansion device in the form of a tube having an internal diameter in the range from 3/4 to 1/10 of the internal diameter of the tubular reactor in a manner such that the pressure and temperature of the expanded reaction product are lower than those in the tubular reactor.

CLASS 32F.b. 134582.

#### MANUFACTURE OF BIPYRIDILIUM SALTS.

IMPERIAL CHEMICALS INDUSTRIES LIMITED, OF IMPERIAL CHEMICAL HOUSE, MILLBANK, LONDON, S. W. 1., ENGLAND.

Application No. 134582 filed February 11, 1972.

Convention date February 22, 1971 (5098/71) U.K.

#### 27 Claims—No drawings.

A process for the manufacture of a 1, 1'-disubstituted-4, 4'-bipyridylum salt which comprises reacting a metal-pyridine interaction product with an alkylene oxide and subsequently oxidising (i) the 1, 1'-disubstituted-1, 1', 4, 4'-tetrahydro-4, 4'-bipyridyl reaction product thus obtained, (ii) a 1, 1'-di(hydroxyalkyl)-1, 1', 4, 4'-tetrahydro-4, 4'-bipyridyl obtained by protonation of the said reaction product or (iii) a 1, 1'-di (alkoxyalkyl)-1, 1', 4, 4'-tetrahydro-4, 4'-bipyridyl obtained by alkylation of the said reaction production.

CLASS 32F.c. 134735.

A PROCESS FOR RECOVERING OPTICALLY PURE L-AND D-ISOMERS OF MENTHOL, NEOMENTHOL AND ISOMENTHOL.

HAARMANN & REIMER GMBH. OF HOLZMIN-DEN, FEDERAL REPUBLIC OF GERMANY,

Application No. 134735 filed February 24, 1972.

#### 13 Claims

A process for the separation of *d*-and *l*-menthol neomenthol or isomenthol in which *d*, *l*-menthol neomenthol

or isomenthol is esterified with benzoic acid, a substituted benzoic acid or hexahydrobenzoic acid; the *d*, *l*-ester mixture thus obtained is selectively crystallised by inoculation of an oversaturated solution or a melt thereof with crystals of the pure *d*-or *l*-ester; and the recovered crystals are hydrolysed by methods known per se.

CLASS 93.

135024.

PROCESS FOR CONVERSION OF WASTE MATERIAL INTO MOULDING GRANULES.

DILBAR HUSSAIN MALIK, G-14, NIZAMUDDIN WEST, NEW DELHI-13, INDIA.

Application No. 135024 filed March 22, 1972.

8 Claims—No drawings.

Process for the preparation of moulding granules from waste material such as herein defined, which comprises; (i) cleaning the said waste material by conventional methods; (ii) removing the moisture from said material by methods as herein defined; (iii) treating the said cleaned and moisture free waste material with a plasticisers and/of graphite or molybdenum disulfide to improve tensile and elastic properties of the waste material; and (iv) extruding the obtained mass of step (iii) to obtain moulding granules.

CLASS 186-E and 206-D+E.

135298.

FLYBACK EHT AND SAWTOOTH CURRENT GENERATOR.

N. V. PHILIPS GLOEILAMPENFABRIEKEN, AT EMMASINGEL 29, EINDHOVEN (HOLLAND).

Application No. 135298 filed April 17, 1972.

6 Claims.

A flyback EHT and sawtooth current generator particularly for television display apparatus including switching means which are periodically non-conducting during a flyback period  $\tau$  and are conducting during a scan period  $T-\tau$  and a network having input terminals connected to the switching means, the network comprising a transformer having at least one primary winding and possibly one or more coils connected thereto through which said sawtooth current flows during the scan period, and a secondary winding to which a rectifier circuit is connected for generating said EHT from the voltage pulses occurring during the flyback period at the secondary winding, said network, during the flyback period, having a first resonant frequency  $f_0$  which is at least substantially equal to the expression.

$$\frac{K}{2\tau} \left\{ 1 + \frac{4}{\pi^2} \frac{\tau}{T-\tau} (1=2/3S) \right\}$$

wherein  $K=1$  and  $S$  is a correction factor which is equal to the relative reduction of the slope of the sawtooth current at the end of the scan period relative to this slope in the middle of the scan period, and a second resonant frequency  $f_2$  which is at least substantially equal to the said expression for  $K=5$ , characterized in that in said network further reactances are present which increase the order of the network during the flyback period to a minimum of 6 in such a manner that the network has a third resonant frequency  $f_3$  which is at least substantially equal to the above-mentioned expression for  $K=7$ .

CLASS 32F**b** and 55D**b**.

135434

A PROCESS FOR PREPARING DERIVATIVES OF SACCHARIN.

KUMIAI CHEMICAL INDUSTRY CO., LTD., OF NO. 6-2, 2-CHOME, OTE-MACHI, CHIYODA-KU, TOKYO, JAPAN.

Application No. 874/72 filed July 15, 1972.

3 Claims.

A process for producing a compound of the general formula shown in Fig. 1 of the accompanying drawings, wherein n represent 0, 1 or 2, which comprises reacting 2, 3-dihydro-3-oxy-o-benz-isosulfonazole with a compound having the formula shown in Fig. 2 of the drawings, wherein n has the meaning as given earlier.

CLASS 32A<sub>2</sub>.

135435.

Application No. 917/Cal/73 filed April 18, 1973.  
ANTHRAQUINONE DYESTUFFS.

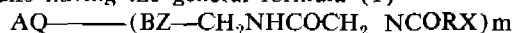
NIPPON KAYAKU CO., LTD. OF NEW KAIJO BLDG., 2-1, 1-CHOME, MARUNOUCHI, CHIYODA-KU, TOKYO, JAPAN.

Appication No. 917/Cal/73 filed April 18, 1973.

Division of Application No. 132390 filed August 5, 1971.

Claim 1.

A process for the production of reactive anthraquinone dyestuffs having the general formula (1)



R

wherein AQ is an anthraquinone nucleus, BZ is a benzene nucleus having a replaceable hydrogen and combines through an N or O atom with an anthraquinone nucleus, R is a saturated or unsaturated aliphatic hydrocarbon residue having 1-3 carbon atoms, R' is a hydrogen atom or methyl group, X is a chlorine or bromine atom the anthraquinone nucleus or benzene nucleus have 1 or 2 sulfonic acid, m is 1 or 2, which comprises reacting an anthraquinone dyestuff which combines through an N or O atom with an aromatic nucleus having a replaceable hydrogen atom with a reactive substance of the following general formula (2)



R'

wherein R, R' and X are same mentioned above, and with formaldehyde or a compound which forms formaldehyde and if necessary, sulfonating the product in a manner such as herein described.

## PATENTS SEALED

126428 126443 126682 126792 127068 127555 127701  
127930 128225 128300 130267 130577 131515 132520  
134352.

## PATENTS DEEMED TO BE ENDORSED WITH THE WORDS "LICENCES OF RIGHT"

The following patents are deemed to have been endorsed with the words "Licences of right" under Section 87 of the Patents Act, 1970. The dates shown in the crescent brackets are the dates of the patents.

No.	Title of the invention.
109894 (25.3.67)	Pesticidal compositions.
109897 (27.3.67)	Rust preventing composition and a process for making them.

No.	Title of the invention.
109901 (27.3.67)	Conversion of green tea to black tea.
109902 (27.3.67)	Water treatment process and apparatus.
109914 (27.3.67)	New anthraquinone dyestuffs, process for their manufacture and use.
109915 (9.5.66)	A process for hydrogenating unsaturated compounds in C <sub>8</sub> -hydrocarbon fractions.
109949 (28.3.67)	Process for preparing tricyclohexyltin hydroxide.
109952 (28.3.67)	Cellulose bleaching plant and method of bleaching cellulosic pulp.
109958 (28.3.67)	Process for the manufacture of phenyl esters and phenol from benzene.
109963 (28.3.67)	Process for treating crude mineral solutions.
109964 (28.3.67)	Continuous cyclic process for the pickling of metal for regenerating spent pickle liquor and for regenerating an agent employed to regenerate said spent pickle liquor.
109965 (28.3.67)	Process for producing granular compound fertilizer.
109979 (29.3.67)	A process for preparing phosphoric acid concurrently with gypsum.
109982 (31.3.66)	Molluscicidal composition.
110004 (30.3.67)	Novel styrene compounds, their manufacture and compositions containing them.
110005 (30.3.67)	Process for the manufacture of fine-grain copolyamides from terephthalic and isophthalic acid and aliphatic dicarboxylic acids.
110010 (31.3.67)	Improved process for the separation of hydrocarbons.
110011 (31.3.67)	Process for the preparation of crystalline aluminosilicates.
110013 (31.3.67)	Fungicidal compositions and fertilizers containing pyrimidine derivatives.
110037 (3.4.67)	Extraction of tanning materials from cashew nut skin, viz the testa covering the seed kernel of <i>Anacardium occidentale</i> .
110088 (4.4.67)	Urea derivatives and process for the preparation thereof.
110090 (5.4.67)	Improvements in or relating to the preparation of graft copolymers of acrylonitrile, butadiene and styrene.
110099 (5.4.67)	Manufacture of carbon black.
110109 (6.4.67)	Improvements in olefin-metathesis process.
110125 (7.4.66)	Improvements in or relating to the heat treatment of aluminium alloys.
110130 (29.4.66)	Improvements in or relating to the purification of acrylonitrile.
110131 (22.7.66)	Improvements in or relating to the purification of acrylonitrile.
110135 (10.4.67)	Process of extracting iron from oxidic ferrous ores.
110140 (1.12.66)	Herbicidal compositions.

No.	Title of the invention.	106887	106976	107079	107211	107232	107242	107275
110149 (10.4.67)	A process for polymerizing glycolide.	107644	107899	107903	108748	109774	111170	111929
110153 (31.8.68)	Improvements in or relating to chemical beneficiation of ilmenite.	112069	112081	112135	112149	112230	112231	112233
110171 (11.4.67)	Process for the preparation of oxime carbamates.	112238	112241	112253	112284	112286	112312	112313
110172 (11.4.67)	Insecticidal compositions.	112373	112374	112449	112485	112569	112845	113002
110181 (12.4.67)	Pesticidal compositions.	113240	113670	113737	114874	117218	117300	117367
1110215 (14.4.67)	Improved solvent extraction process.	117368	117394	117465	117466	117496	117499	117502
110220 (19.12.66)	Process for the production of a brushable polyurethane gel.	117526	117564	117572	117609	117615	117715	117754
110223 (14.4.67)	Process for producing bleached and purified cellulose acetate.	117781	117811	117852	118090	118188	121428	121780
110228 (17.4.67)	Process for the continuous production of unsaturated aldehydes or unsaturated nitriles from monoolefines and oxygen or monoolefines ammonia and oxygen respectively.	121927	122380	122827	122857	122934	122936	122937
110229 (17.4.67)	Water-soluble monoazo-dyestuffs, process for their preparation and process for dyeing or painting fibrous textile materials with said dyestuffs.	122960	122975	123022	123050	123078	123097	123127
110232 (17.4.67)	Dehydrogenation of ethylbenzene to styrene.	123152	123156	123199	123222	123318	123332	123404
110237 (17.4.67)	A process for the polymerization of lactones.	123461	123462	123463	123464	123471	123480	123486
110245 (18.4.67)	Pulping process.	124118	124244	125473	125888	126197	128105	128276
110258 (18.4.67)	New anthraquinone dyestuff pigments, process for their manufacture and materials pigmented therewith.	128299	128329	128335	128393	128554	128648	128796
110259 (18.4.67)	Process for the manufacture of aminoanthraquinones.	128862	128875	128886	129489	129884	129885	129917
110263 (18.4.67)	Maleinization of synthetic rubber.	130200	131055	131234	131434.			
110267 (18.4.67)	Process for the polymerization of $\beta$ -lactones.							
110271 (18.4.67)	Production of carbon block.							
110275 (18.4.67)	Stabilized Pesticidal compositions of 2-alkoxycarbony laminobenzimidazole carboxylic esters.							

## CESSATION OF PATENTS

(1)

116707	116709	116716	116740	116741	116742	116744
116745	116755	116765	116788	116793	116796	116827
116854	116878	116880	116886	116895	116897	116900
116932	116951	116953	116958	116978	116983	116996
116997	116999	117000	117001	117002	117010	117011
117033	117035	117048	117063	117090	117091	117097
117098	117099	117102	117103	117104	117117	117119
117136	117137	117147	117152	117168	117178	117179
117192	117205	117206	117213	117222	117235	117236
117247	117262	117263	117264	117283	117294	117301
117317	117326	117331	117357	117358	117359	117360
117377	117378	117380	117388	117411	117414	117416
117419	117425	117452	117461	117462	117463	117464
117472	117503	117504	117508	117509	117514	117517
117521	117537	117543	117547	117550	117551	117552
117575	117578	117580	117586	117599	117604	117613
117621	117628	117640	117651	117653	117659	117671
117674	117682	117692	117695	117696	117697	117703
117704	117706	117717	117726	117729	117730	117733
117737	117757	117758	117760	117765	117766	117769
117772	117774	117782	117784	117786	117787	117793
117796	117819	117824	117825	117831	117838	117840
117842	117851	117864	117867	117874	117875	117888
117891	117892	117896	117907	117918	117922	117923
117930	117935	117944	117955	117965	117966	117967
117968	117970	117973	117974	117976	117979.	

(2)

110276 (18.4.67)	Pesticidal compositions containing esters of benzimidazolecarbamidic acid.	117986	117994	118003	118021	118026	118032	118037
110284 (26.4.66)	Process for the purification of olefine and process for the production of olefin sulphonates.	118041	118043	118049	118051	118052	118080	118083
		118089	118091	118103	118104	118105	118112	118119
		118122	118140	118149	118150	118160	118167	118169
		118175	118177	118185	118197	118198	118200	118202
		118203	118218	118219	118220	118226	118235	118258
		118259	118271	118278	118292	118294	118304	118310
		118316	118326	118340	118342	118352	118353	118356
		118368	118369	118370	118371	118386	118388	118391
		118410	118420	118432	118435	118437	118439	118441
		118443	118448	118467	118480	118486	118496	118505
		118509	118521	118532	118536	118542	118547	118559
		118565	118579	118584	118587	118621	118633	118638
		118639	118641	118652	118653	118654	118673	118699
		118705	118708	118711	118717	118722	118723	118732
		118733	118744	118751	118756	118761	118764	118780
		118783	118815	118828	118839	118854	118855	118869
		118873	118874	118876	118878	118880	118893	118895
		118897	118902	118910	118916	118920	118922	118924
		118928	118938	118964	118977	118981	118985	118988
		119007	119012	119013	119016	119030	119041	119043
		119057	119058	119062	119065	119103	119114	119117
		119123	119135	119137	119150	119155	119156	119157
		119179	119224	119225	119226	119233	119234	119242
		125861.						

## RENEWAL FEES PAID

65096	68627	68649	68729	68730	68743	68761	68839
68841	68874	68930	70200	70806	70914	71782	73067
73142	73296	73345	73367	73447	73714	73715	74053
74107	78154	78351	78417	78445	78482	78499	78532
78683	78907	79653	81410	81411	83495	83876	83918
83919	83923	83924	83980	83999	84062	84156	84158
84184	84201	84214	84261	84304	84333	84520	85500
85501	89468	89552	89684	89689	89705	89712	89769
89773	89816	89837	89864	89874	89941	89942	89960
89961	90076	90113	90562	90715	90716	91954	94527
94969	95423	95424	95512	95533	95669	95694	95735
96648	97945	98775	100273	100837	101092	101304	
101314	101367	101398	101423	101483	101491	101532	
101540	101547	101572	101651	101672	101673	101720	
101735	101758	101914	101925	101929	101930	101994	
101999	102284	106704	106754	106777	106846	106852	

# REGISTRATION OF DESIGNS

The following designs have been registered. They are not open to inspection for a period of two years from the date of registration except as provided for in Section 50 of the Designs Act, 1911.

The date shown in each entry is the date of registration of the design included in the entry.

Class 9. No. 140980. M/s. Sovrin Knit Works, 20/4, Mathura Road, Faridabad (Haryana) a registered partnership firm of Indian Nationality, "Textile goods", May 18, 1973.

Class 13. No. 140802. Shree Ram Mills Ltd., Fergusson Road, Lower Parel, Bombay-13 (Maharashtra), Nationality—Indian Company, "Textile goods", March 30, 1973.

Copyright Extended for a Second Period of Five Years.

Design Nos. 133443, and 133442. Class—1.

Design Nos. 133981 and 133982 Class—3.

Design Nos. 133983 to 133985 Class—4.

S. VEDARAMAN,  
Controller General of Patents,  
Designs and Trade Marks.